APPENDIX A

Soil Series Present within the Site Area

Soil Series	Definition
Beltsville Silty loam **(37B)**	Surface layer 0 to 8" grayish brown silt loam Subsoil 8 to 17" yellowish brown clay loam slow permeability Fragipan layer 17 to 36" yellowish brown loam from very slow permeability Beneath fragipan 36 to 52" brownish yellow clay loam moderately rapid permeability Substratum 52 to 72" mottled brown, gray and yellow sandy loam Areal extent: 2 to 25 acres. Slope: nearly level to gentle slope. Slopes and ridge crests are convex but range to concave. deep, moderately well-drained Drainage: moderately well drained with a slow percolation rate. Occurrence: 2 - 25 acres of woodland acreage. Good tree productivity upland woodlands Inclusions: well to moderately well-drained Matapeake & Mattapax soils (when fragipan not present) Permeability: slow to medium surface runoff; very slow above & below fragipan slight to moderate erosion hazard. Water table: perched seasonal high water table at a depth of 1.5 to 2.5 feet. Depth to bedrock is > 60" Limitations: low water holding capacity Soft when wet; not suited for building site development; does not support heavy construction vehicles
Mattapex Silt loam **(46B)**	Surface layer 0 - 11" friable, grayish brown silty loam; friable Subsoil 54" thick olive brown / gray silt loam or silty clay loam; low shrink-swell potential. Substratum down to 85" mottled yellowish brown sandy loam Area extent: 2 to 15 acres. Slope: 2 to 6 %; gently sloping Drainage: well-drained Occurrence: coastal plans and terraces; Inclusions: small areas of well drained Matapeake soils are on slightly higher areas Permeability: moderate with moderate water capacity. Surface runoff medium; moderate erosion hazard; surface rapid with severe erosion Characteristics: mapped in woodlands; productive soils for loblolly and Virginia pine, poplar and oaks Limitations: soft when wet root-zone extends to a depth of +60 ". seasonal water table and low strength needs suitable base material to provide enough strength to support vehicles
Dumfries Sandy loam **(61C/61D)**	Surface layer 1 to 2" grayish brown sandy loam; friable easily tilled Subsurface layer 8" thick yellowish brown or pale brown sandy loam Subsoil 23" thick yellowish brown sandy loam; low shrink-swell potential. Substratum 84" deep yellowish brown or pale brown sandy loam Area extent: 2 to 15 acres. Slope: 7-15%, gently sloping, well-drained Drainage: poorly- drained Occurrence: on sides of slopes next to drainageways; occupies woodlands particularly loblolly and Virginia pine Inclusions: well-drained Lunt soils that are in depressions Permeability: moderately rapid in subsoil & substratum; moderate water capacity; medium surface runoff with moderate water capacity. Surface runoff rapid with severe erosion Limitations: moderate erosional hazard

Soil Series	Definition	
		is cause contamination hazard to ground water and nearby streams root-zone extends to a depth of +60 “. used for septic tank absorption fields or sanitary landfills.
Matapeake Silt loam **(45B)**	Surface layer Subsoil Substratum Slope: Drainage: Inclusions: Water table: Permeability: Constraints:	9” grayish brown silt loam 9 to 45” - strong brown silty clay loam to 65” light yeallowish brown sandy loam Lacks fragipan of the Beltsville 2 to 7 % in a higher landscape position and better drained than 37B soils small areas of Mattapex and Beltsville soils. seasonal high water table with surface water existing in winter/early spring or after heavy rains moderate permeability in surface layer and subsoil; moderate water capacity; medium runoff potential Suitable for building site development; moderate erosion hazard
Lunt Fine sand (49C)	Surface layer Subsoil Substratum Slope: Soil type: Drainage: Occurrence: Inclusions: Permeability: Limitations:	0 to 7” thick - dark grayish brown silt loam 7 to 19” thick - strong brown clay 19 to 39 “ - strong brown clay loam. 39 to 72” – yellowish brown sandy loam 7 to 15 % deep, strongly sloping, convex with concave swales and small drainageways. well-drained narrow to medium wide ridges. Areas are irregularly rounded or oblong. 2 to 20 acres. Keyport & Quantico Soils, plus small areas of red gravelly surface & gravelly subsoil layers. Few areas are eroded Few areas are underlain by massive gray marine silt and clay. moderate with to moderately rapid in the surface layer and moderate in the substratum. suitable for site development; does not have sufficient strength & stability to support vehicular traffic, but this can be corrected by strengthening or replacing base material. High shrink-swell potential; high clay content makes soil difficult to spread. ½ acreage in woodland. Runoff is medium. Erosion hazard is severe, depth to bedrock is >60” to bedrock

Source: USDA, 1982